

Please cancel claims 1-44 without prejudice.

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45. (new) A method for reducing visual disturbances in a graphical environment caused by input data received from a force feedback device, said graphical environment implemented by a computer in communication with said force feedback device, said force feedback device including a user manipulatable object manipulatable by a user, the method comprising:

enabling an output of a force sensation from said force feedback device; and

enabling a filtering of said input data according to a disturbance filter process to provide filtered input data, said input data being received from at least one sensor of said force feedback device during said output of said force sensation and being representative of movement of said user manipulatable object in at least one degree of freedom, wherein said filtering of said input data reduces said visual disturbance in said graphical environment caused by said output of said force sensation.

46. (new) A method as recited in claim 45 wherein at least part of said filtered input data is used to update a displayed graphical environment.

47. (new) A method as recited in claim 46 wherein a position of a graphical object in said graphical environment is updated using said filtered input data.

48. (new) A method as recited in claim 45 further comprising enabling a report of said filtered input data to said computer.

49. (new) A method as recited in claim 46 wherein said enabling an output of a force sensation and said enabling a filtering of said input data is performed by a processor local to said force feedback device and separate from said computer in communication with said force feedback device.

50. (new) A method as recited in claim 46 wherein said enabling an output of a force sensation and said enabling a filtering of input data is performed by a driver running on said computer in communication with said force feedback device.

51. (new) A method as recited in claim 45 wherein said disturbance filter process can be enabled or disabled, and wherein said filtering is performed if said associated disturbance filter process is enabled.

52. (new) A method as recited in claim 45 wherein said force sensation is output by at least one actuator of said force feedback device, and wherein said output of said force sensation

is correlated with an event in said graphical environment implemented by said computer in communication with said force feedback device.

53. (new) A method as recited in claim 45 wherein said disturbance filter process modifies said input data only when an associated force sensation is output by said force feedback device.

54. (new) A method as recited in claim 45 wherein said disturbance filter process modifies said input data by sampling said input data over time according to a sampling rate, and using only said sampled input data as said filtered input data.

55. (new) A method as recited in claim 45 wherein said disturbance filter process modifies said input data by time-averaging said input data and reporting said using said time-averaged data as said filtered input data.

56. (new) A method as recited in claim 45 wherein said disturbance filter process modifies said input data by sampling and holding a data value derived from said input data before said force sensation is output, wherein said held data value is used as said filtered input data.

57. (new) A method for implementing a selective disturbance filter for filtering input data used in displaying objects in a graphical environment displayed by a computer in communication with a force feedback device, the method comprising:

filtering said input data according to a disturbance filter process associated with a force sensation to provide filtered input data, said input data being received from at least one sensor of a force feedback device during output of said force sensation by said force feedback device and being representative of movement of a user manipulatable object of said force feedback device in at least one degree of freedom, wherein said filtering of said input data reduces a disturbance in said displayed graphical environment caused by said output of said force sensation on said user manipulatable object; and

providing said filtered input data to be used to update said displayed graphical environment.

58. (new) A method as recited in claim 57 further comprising causing said output of said force sensation from said force feedback device.

59. (new) An apparatus as recited in claim 57 wherein said filtering is performed by a driver running on said computer in communication with said force feedback device.

60. (new) A method as recited in claim 57 wherein said disturbance filter process modifies said input data by sampling said input data over time according to a sampling rate, and using only said sampled input data as said filtered input data.

61. (new) A method as recited in claim 57 wherein said disturbance filter process modifies said input data by time-averaging said input data and reporting said using said time-averaged data as said filtered input data.

62. (new) A method as recited in claim 57 wherein at least part of said filtered input data is used to update a displayed graphical environment.

63. (new) A method as recited in claim 57 wherein a position of a graphical object in said graphical environment is updated using said filtered input data.

64. (new) A method as recited in claim 57 wherein said output of said force sensation is correlated with an event in said graphical environment implemented by said computer.

65. (new) An apparatus for reducing visual disturbances in a graphical environment caused by input data received from a force feedback device, said force feedback device including a user manipulatable object manipulatable by a user, the apparatus comprising:

means for enabling an output of a force sensation from a force feedback device; and

means for enabling a filtering of said input data according to a disturbance filter process to provide filtered input data, said input data being received from at least one sensor of said force feedback device during said output of said force sensation and being representative of movement of said user manipulatable object in at least one degree of freedom, wherein said filtering of said input data reduces said visual disturbance in said graphical environment caused by said output of said force sensation.

66. (new) An apparatus as recited in claim 65 wherein said means for enabling a filtering receives a command from a host computer in communication with said force feedback device to activate said associated disturbance filter process.

67. (new) An apparatus as recited in claim 65 wherein a plurality of disturbance filter processes are stored in a memory, and wherein said force sensation is one of a plurality of different available force sensations that may be output by said force feedback device, wherein at least two of said force sensations are associated with different ones of said disturbance filter processes.